# How does NDOR determine the regulatory speed limit?

The NDOR sets regulatory speed limits on state and federal highways based on a thorough engineering and traffic investigation.

These factors are considered:

- · Road type and surface (curve, hill, etc.);
- · Location and type of access points (intersections, entrances, etc.);
- · Existing traffic control devices (signs, signals, etc.);
- · Crash history;
- · Traffic volume;
- · Sight distances;
- · Pedestrian activity; and
- · Results of a field review and speed study.

The most important part of the traffic investigation is the speed study. Data for this study is collected using a radar speed gun at selected locations on the roadway under ideal driving conditions. The speed data reflects the many roadway environmental factors drivers must take into consideration. The study recognizes that most drivers are trying to reach their destination as efficiently as possible without getting into a crash. It also assumes that most drivers are reasonable. Therefore, the speed that the majority of people consider prudent is an important value.

A technical analysis is done on the results to determine the 85th percentile. This is the value indicating the speed that most (85%) drivers are traveling at or below. Research has shown that a posted speed limit near this value is the maximum safe speed under favorable driving conditions. Studies have shown that traveling much faster or slower than this value can increase your chance of being in a crash.

Engineering judgment is an important component. The traffic investigator must use data and knowledge of nationally recognized engineering and safety principles, combined with experience, to assign the safe speed.

## How Are Speed Limits Established?

Nebraska Statutes, 60-6,190 allows the establishment of speed limits on the State Highway System "upon the basis of an engineering and traffic investigation."

Speed zoning in Nebraska is based on the widely accepted principle of setting speed limits as near as practicable to the speed at or below which 85 percent of the drivers are traveling. According to a Federal Highway Administration study, all states and most local agencies use the 85th percentile speed of free flowing traffic as the basic factor in establishing speed limits.

This speed is subject to revision based upon such factors as: crash experience, roadway geometries, parking, pedestrians, curves, adjacent development, changes to the roadway/roadside environment and engineering judgment. This practice is in accordance with the Federal Highway Administration's "Manual on Uniform Traffic Control Devices" which has been adopted by the State of Nebraska for all state and local agencies.

For more information contact: Nebraska Department of Roads Traffic Engineering Division 1500 Hwy 2 Lincoln, NE 68509 (402) 479-4594



# How Are Speed Limits Established?



## What are the legal speed limits?

#### Nebraska State Statute 60-6,185

Nebraska's speed regulations are based on the same basic speed law that is used in all 50 states: "No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the conditions and having regard to the actual and potential hazards then existing. A person shall drive at a safe and appropriate speed when approaching and crossing an intersection or railroad grade crossing, when approaching and going around a curve, when approaching a hillcrest, when traveling upon any narrow or winding roadway, and when special hazards exist with respect to pedestrians or other traffic or by reason of weather or highway conditions."

Statutory limits are based on the concept that uniform categories of highways can be traveled safely at certain preset maximum speeds under ideal conditions. Whether the speed limit is posted or not posted, drivers should reduce their speed below these values in poor weather, heavy traffic, and under other potentially hazardous conditions.

These are Nebraska's statutory speeds unless posted otherwise:

- 20 mph in business districts
- 25 mph in residential district
- 50 mph on any roadway that is not dustless (or gravel) and not part of the state highway system
- 55 mph on any dustless (or paved) roadway and not part of the state highway system
- -60 mph on state highway system other than expressway or freeway
- 65 mph on expressway that are part of the state highway system
- 75 mph on rural interstate highways

Whenever these statutory speed limits are not the appropriate speed limit for a specific section of a highway, the Nebraska Department of Roads is responsible for posting of other regulatory speed limits. (See Nebraska State Statute 60-6,186)

### Intent of Speed Zoning

The basic intent of speed zoning is to identify a safe and reasonable limit for a given road section. A uniform speed of vehicles in a traffic flow results in the safest operation. The posted speed limits can keep the traffic flowing smoothly, provided the majority of drivers find the speed limits reasonable. To best do this, the limits must be consistently set throughout the state.

Reasonable speed limits also give the motorist an idea of a safe speed to drive in an unfamiliar location.

Police officials use reasonable speed limits to identify excessive speeds and curb unsafe behavior.

# Will lowering the speed limit reduce speeds?

Unlikely. Federal Highway Administration research<sup>1</sup> show that there is little change in the speed pattern after the posting of a speed limit. The driver is much more influenced by the roadway environment.

# Will lowering the speed limit reduce crash frequency?

Again, unlikely. Although lowering the speed limit is often seen as a solution to preventing crashes, this is not the case. Crashes are most often the result of driver inattention and driver error. However, if a posted speed limit is unrealistically low, it creates a greater speed variance (i.e. some drivers follow the speed limit, while most drive at a higher speed that seems reasonable to them). This speed variance can lead to tailgating, unsafe passing, road rage, and ultimately to more crashes.

http://www.fhwa.dot.gov/publications/research/safety/humanfac/rd97002.cfm

#### What Realistic Speed Limits Do:

Realistic speed limits are of public importance for a variety of reasons:

- 1. They invite public compliance by conforming to the behavior of the majority.
- 2. They give a clear reminder of reasonable and prudent speeds to non-conforming violators.
- 3. They offer an effective enforcement tool to the police.
- 4. They tend to minimize the public antagonism toward police enforcement that results from obviously unreasonable regulations.
- 5. They encourage drivers to travel at the speed where the risk of accident involvement is the lowest.

#### What Unrealistic Speed Limits Do:

Unrealistic speed limits are also of public importance for the following reasons:

- 1. They do not invite voluntary compliance, since they do not reflect the behavior of the majority.
- 2. They make the behavior of the majority unlawful.
- They increase public antagonism toward the police, since the police are enforcing a "speed trap".
- 4. They may create a bad image for a community in the eyes of tourists.
- 5. They may increase the potential for accidents along a roadway.

Additional thank you to lowa DOT and Kansas DOT for allowing NDOR to use some of their information for this brochure. NDOR 2012

<sup>&</sup>lt;sup>1</sup> Federal Highway Administration "Effects of Raising and Lowering Speed Limits on Selected Roadway Sections" Publication Number: FHWA-RD-97-002 Date: 1997